

## COP2805C Module 4 Graded Assignment

For this assignment we will build and send calendar reminders for appointments from our Appointment Application from Module 3.

Design a CalendarReminder interface with two abstract methods:

```
// build a reminder in the form of a formatted String  
public String buildReminder(String msg);  
  
// send a reminder using contact's preferred notification method  
public void sendReminder(String reminder);
```

- Store your interface in a separate .java file
- Use your Appointment Application solution from Module 3 to implement this interface, including the concrete methods.
- Use any other tools you find necessary to format the reminder with the same appearance as the sample output shown below. Your format should pad the lines as necessary to achieve the vertical alignment shown, including a space before and after the longest line. The padding should be determined computationally based on the length of the longest line (which could vary), do not use numeric literals. Notice that these lines are left-aligned, they are not centered.
- Use the contact's preferred notification method to send the reminder (a simple output statement indicating how the reminder is being sent is adequate). Assume that for a preference of PHONE that an SMS text message will be sent.
- Add a method which iterates the the appointment list and determines if it is time to send a reminder; compare the reminder time of each appointment to the current time down to the minute; if equal, send the reminder.
  - Generate test data which triggers one or more reminders to be sent (you can use the "now()" method demonstrated in the practice example to create one or more appointments in the near future with a reminder time of "now()", then call this method.

Submit your solution to the GitHub classroom repo created when you accepted the assignment invitation.

Sample output:

**Sending the following SMS message to John Smith at (904) 555-1212**

```
+++++  
+ Hello, John Smith! +  
+ This is a reminder that you have an upcoming appointment. +  
+ + +  
+ Title: Dentist +  
+ Description: Cleaning appointment with Dr. Kildaire +  
+ Date: 7 December, 2023 +  
+ Time: 08:00AM US/Eastern +  
+++++
```